

WHAT IS CLAIMED IS:

1. Apparatus for raking berries, said apparatus comprising:
a frame assembled on wheels, said frame having a forward end and a rearward end;
a rake head rotatably mounted on said forward end of said frame, said rake head having a plurality of rakes, wherein each rake of said plurality of rakes has a constant rake orientation;
a berry-conveyance means mounted in said frame rearward of said rake head;
and a main drive means for driving said wheels, said rake head, and said berry-conveyance means;
wherein said rake orientation remains constant relative to a vertical plane when said rake head is rotating.
2. The apparatus of claim 1, wherein said rake head includes a rake-head shaft and a rake-head flange mounted at each end of said head shaft, wherein said head shaft is mounted centrally in each said rake-head flange;
wherein said each rake is mounted on said rake-head flange so as to extend parallel to and radially displaced from said rake-head shaft; and
wherein said rakes are spaced evenly about said rake-head flange equidistant from said rake-head shaft.
3. The apparatus of claim 2, wherein said rake comprises a rake bar with a plurality of teeth that extend in a row radially from said rake bar.
4. The apparatus of claim 2, wherein said a rake drive system is coupled to said main drive means, said rake drive system including a first rake-head drive means for driving said rake head and a second rake drive means for driving each said rake of said plurality of rakes;

wherein said first rake-head drive means drives said rake head to rotate at a head speed that is relative to a ground travel speed of said frame; and

wherein said second rake-head drive means drives said each rake to rotate at a rake speed that is relative to said head speed so as to maintain a constant orientation of said rake relative to said vertical plane while said rake head rotates through a complete rotation.

5. The apparatus of claim 4, wherein said rake drive system includes a conveyor drive means for driving said berry-conveyance means.

6. The apparatus of claim 1 further comprising a control mechanism that is actuatably linked to said main drive means so as to control an on/off state of said main drive means.

7. The apparatus of claim 1, wherein said main drive means is a motor that drives a drive shaft; and

wherein a first power-coupling means is provided to link said main drive means with said rake head and a second power-coupling means provided to link said main drive means with said drive wheels.

8. The apparatus of claim 7 further comprising a first control mechanism and a second control mechanism, each mounted separately on said frame;

wherein said first control mechanism is actuatably linked to said first power-coupling means and said second control mechanism is actuatably linked to said second power-coupling means, so as to provide separate controllability of said first power-coupling means and said second power-coupling means.